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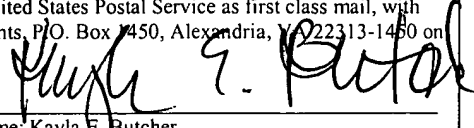
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Qiang Luo  
Serial No.: 10/786,846  
Filed: 2/25/2004  
Title: LOW DARK CURRENT CMOS IMAGE SENSOR PIXEL HAVING A PHOTODIODE ISOLATED FROM FIELD OXIDE

Examiner: Not Yet Assigned  
Group Art Unit: Not Yet Assigned  
Docket: 50019.0272US01

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 27, 2004.

By:   
Name: Kayla E. Butcher

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**23552**

PATENT TRADEMARK OFFICE

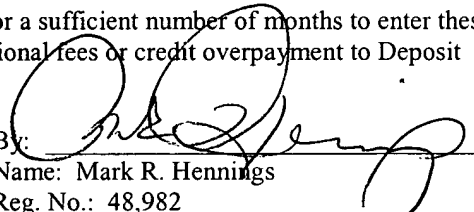
Sir:

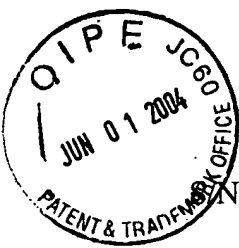
We are transmitting herewith the attached:

- ☒ Transmittal Sheet in duplicate containing Certificate of Mailing
- ☒ Information Disclosure Statement, Form 1449, 6 Reference(s)
- ☒ Return postcard

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

MERCHANT & GOULD P.C.  
P.O. Box 2903, Minneapolis, MN 55402-0903  
612.332.5300

By:   
Name: Mark R. Hennings  
Reg. No.: 48,982  
MRH



10/786,846

PATENT

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By:

Name: Kayla E. Butcher

INFORMATION DISCLOSURE STATEMENT (37 C.F.R. § 1.97(b))

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

This statement should be considered because it is submitted before the mailing date of a first Office Action on-the-merits. Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449.

In accordance with 37 C.F.R. § 1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked

as being considered and initialed by the Examiner, to the undersigned with the next official communication.

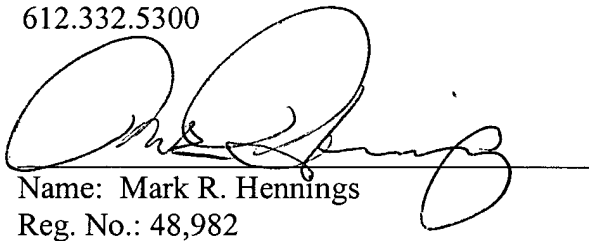
Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.



Date: May 27, 2004

Respectfully submitted,

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, MN 55402-0903  
612.332.5300

A handwritten signature in black ink, appearing to read "Mark R. Hennings". The signature is written over a horizontal line. Below the line, the text "Name: Mark R. Hennings" and "Reg. No.: 48,982" is printed.

Name: Mark R. Hennings  
Reg. No.: 48,982

<b>FORM 1449*</b> <b>INFORMATION DISCLOSURE STATEMENT</b> <b>IN AN APPLICATION</b> (Use several sheets if necessary)	Docket Number: 50019.0272US01	Application Number: 10/786,846
	Applicant: Qiang Luo	
	Filing Date: 2/25/2004	Group Art Unit: Not Yet Assigned

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,841,158	11/24/1998	Merrill	257	233	
	5/841,176	11/24/1998	Merrill	257	446	

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Scott R. Stiffler, Jerry B. Lasky, Charles W. Koburger and Wayne S. Berry; <i>Oxidation-Induced Defect Generation in Advanced DRAM Structures</i> ; May 1990, Volume 37, Number 5, A Publication of the IEEE Electron Devices Society; pgs. 1253-1258
	Yukio Takano and Hirotsugu Kozuka; <i>Dislocation Generation due to Stress Induced by Oxidation in Si Grooves</i> ; Japanese Journal of Applied Physics Volume 22 (1983) Supplement 22-1; PGS. 553-556; Proceedings of the 14 <sup>th</sup> Conference (1982 International) on Solid State Devices, Tokyo 1982
	Hsiu-Yu Cheng and Ya-Chin King; <i>An Ultra-Low Dark Current CMOS Image Sensor Cell Using n+ Ring Reset</i> ; September 2002, Volume 23, Number 9, A Publication of the IEEE Electron Devices Society; pgs. 538-540
	Ikuko Inoue, Nagataka Tanaka, Hirofumi Yamashita, Tetsuya Yamaguchi, Hiroaki Ishiwata and Hisanori Ihara; <i>Low-Leakage-Current and Low-Operating-Voltage Buried Photodiode for a CMOS Image</i> ; January 2003, Volume 50, Number 1, 2003 IEEE; pgs. 43-47

**23552**

PATENT TRADEMARK OFFICE

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	